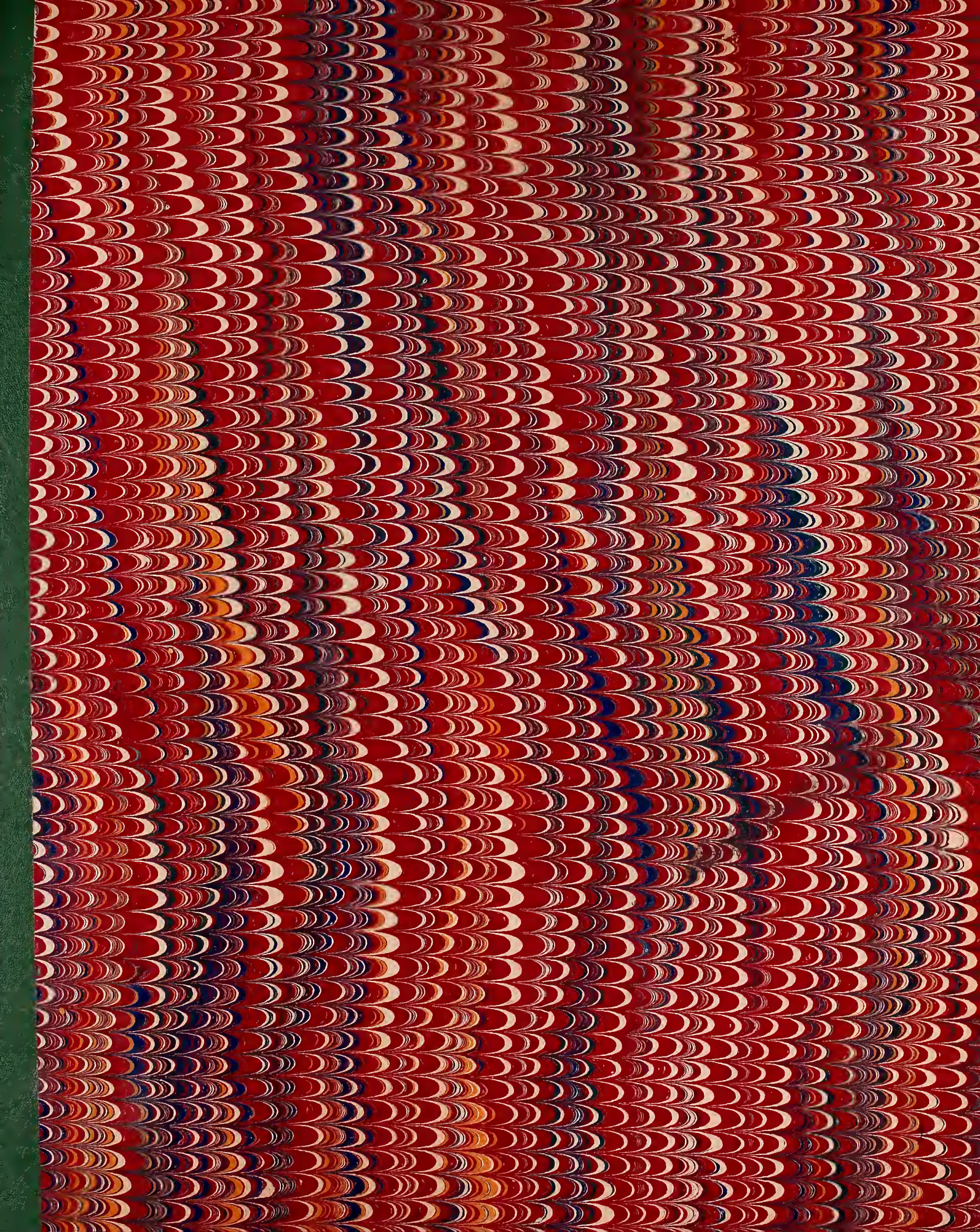



Cab. 13. Sheet 1

1. Mw. 1845. 2.







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1983

PHOTOGRAPHS

OF

SURGICAL CASES AND SPECIMENS.

PREPARED BY DIRECTION OF THE SURGEON GENERAL,

BY

Brevet Lieutenant Colonel GEORGE A. OTIS, Assistant Surgeon, U. S. A.,

CURATOR OF THE ARMY MEDICAL MUSEUM.

WASHINGTON:

SURGEON GENERAL'S OFFICE.



1.Mw.1865.2

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PHOTOGRAPHIC SERIES No. 51. *Successful Excision of the Head of the Right Humerus.*

Sergeant Chauncey A. Winsor, Co. A, 6th Wisconsin Vols., was wounded at the battle of Gravelly Run, March 31st, 1865, by a conoidal musket ball, which entered below the middle of the right clavicle, and, passing outwards and backwards, shattered the head of the right humerus. The same day the head of the bone was excised by Surgeon Hull, 6th Wisconsin Vols., through a straight incision parallel to the axis of the arm.

May 4th, 1865, Winsor was transferred from the field hospital to Judiciary Square General Hospital, at Washington, in good condition. Save an interruption from an attack of erysipelas, which supervened about the middle of May, the case continued to progress most favorably.

June 13th, 1865, when the patient was photographed, the prospect of an useful limb was very encouraging.

Photographed at the Army Medical Museum,

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SPECIMEN No. 3310. *Right Tibia affected with Scrofulous Caries and Necrosis.*

John William Southard, an orphan lad of 14 years, a refugee at Mound City, Illinois, was admitted to hospital in October, 1864, on account of scrofulous disease of the right leg, of four years duration.

The knee-joint was implicated, and numerous old sinuses communicated with the shaft of the tibia, which appeared to be necrosed in its entire extent.

On October 5th, 1864, amputation at the lower third of the thigh was practiced by Surgeon H. Wardner, U. S. Vols.

The lad's general health improved after the operation. In December, 1864, a ring of bone exfoliated from the femur. The stump then healed, and at the end of May, 1865, Dr. Wardner wrote that the result was all that could be desired.

The specimen and the facts relating to it were contributed by the operator.

Photographed at the Army Medical Museum,

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PHOTOGRAPH NO. 53. *Head, Neck, and Trochanters of the Right Femur, shattered by a Conoidal Musket-Ball, and successfully excised.*

Private Hugh Wright, Co. G, 8th New Jersey Volunteers, was wounded at the battle of the Wilderness, May 5, 1864, and was admitted into Stanton Hospital, at Washington, May 25, 1864. A conoidal musket ball, entering an inch to the inner side of the right femoral artery, two inches below Poupart's Ligament, had passed backwards and downwards, shattering the neck and trochanters of the femur, and lodged against bone. On May 27th, Assistant Surgeon George A. Mursick, U. S. V., made a vertical incision over the great trochanters, six inches in length, and extracted the ball and splinters, and excised the head, neck, and trochanters of the femur. During the operation, anæsthesia was maintained by ether. The shock of the operation was great, and reaction tardy. On the succeeding day there was much nervous agitation, the pulse was frequent and feeble, the tongue dry, and thirst excessive. On June 1st, these unfavorable symptoms had disappeared; the wound looked well, and discharged laudable pus. From this date, a tonic and supporting regimen was diligently enforced, and the patient's progress towards recovery was satisfactory. In November, 1864, and again in February, 1865, abscesses formed in the thigh, but, after poulticing and incision, they gave little trouble. In April, 1865, Wright moved about on crutches. On the 17th of April, he was discharged from hospital and from the service of the United States. There was still a trifling fistulous orifice near the acetabulum; but the general health was excellent, and the prospect of ultimate recovery most encouraging. The specimen is numbered 3375 of the Surgical Section of the Army Medical Museum, and was contributed, with the history, by the operator.

Photographed at the Army Medical Museum.

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SPECIMEN No. 3576.—PHOTOGRAPHIC SERIES, No. 54. *Case of Successful Excision of the Right Elbow-Joint for Gunshot Injury.*

Private William D. Riley, Co. D, 86th New York Vols., aged 21 years, was accidentally wounded, at Brandy Station, Va., Nov. 26th, 1863, by a musket ball, which shattered the inner condyle of the right humerus and the olecranon process of the ulna. He was admitted to Mansion House Hospital, at Alexandria, the same day, having bled quite largely on the way.

On December 19th, 1863, Surgeon Charles Page, U. S. A., excised the elbow-joint, employing the H shaped incision. Two and a half inches of the lower extremity of the humerus, an inch of the upper extremity of the ulna, and a small portion of the head of the radius were removed.

The case progressed most favorably, and in May, 1864, Riley went to his home on furlough, with a useful arm. He was subsequently discharged from service.

In 1865, he re-enlisted in Co. K, 5th Regiment, First Army Corps, with the approval of Lieut. Colonel Dougherty, Medical Director of the Corps. "The man went through the manual before me," Surgeon Dougherty writes, "and stated his readiness to do all the duties of a soldier. He wished it recorded that he was competent and prepared, in order that during the term of his service he might be held to full duty. The degree of motion was perhaps one third of the normal amount."

The photograph was taken in June, 1865.

Photographed at the Army Medical Museum,

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PHOTOGRAPHIC SERIES No. 55. *Consolidated Gunshot Fracture of Left Femur. Firm Union after the Removal of Large Fragments of the Shaft.*

Private Richard Hanlon, Co. C, 5th U. S. Cavalry, was wounded at the engagement at Beverly Ford, Virginia, June 9th, 1863, by a conoidal musket ball, which fractured the left femur below the middle, and caused extensive longitudinal splitting of the bone. The following day he was admitted into Lincoln Hospital, at Washington.

Anæsthesia being induced by ether, the wound was explored by Acting Assistant Surgeon G. K. Smith, and then sufficiently enlarged to permit the removal of numerous fragments of bone, comprising about three inches of the continuity of the shaft. The ball could not be found. The limb was maintained in the straight position by sand bags.

On June 23d, 1863, an abscess opened near the perinæum, and the ball was extracted from its cavity.

On October 1st, 1863, there was enough union to allow the patient to rotate the limb on its axis. There was three inches shortening. On December 16th, while walking on crutches, the patient fell and re-fractured the femur. By March 6th, 1864, the bone was firmly united, and the wound of entrance was closed. In the middle of June the wound re-opened, and there was a slight discharge until March, 1865. The patient was able to walk about during this period, and served as a watchman at the Government Repair Shops.

The photograph was taken, June 20th, 1865. At that date the limb appeared to be perfectly sound. There were no sinuses, and the fracture was apparently firmly consolidated. The patient could walk long distances without fatigue. There was false ankylosis of the knee-joint.

The facts connected with the case were communicated by Acting Assistant Surgeon G. K. Smith, under whose direction the treatment was conducted.

Photographed at the Army Medical Museum,

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SPECIMEN No. 1931. *Excised Head and Comminuted Upper Portion of Shaft of Left Humerus, with a Conoidal Musket Ball.*

Private Jennison, L, Erving, Co. L, 8th Illinois Cavalry, was wounded at Rixeyville, Va., on November 8th, 1863, by a conoidal musket ball. He was on horseback, with his left side towards the enemy, when the projectile struck the outer border of the left scapula, and, glancing upwards, shattered the neck and upper portion of the shaft of the left humerus. The humerus was badly comminuted, and its head was displaced from the glenoid cavity, but there was no lesion of important vessels or nerves.

Primary excision was performed by Surgeon E. W. H. Peck, 45th Indiana Vols., through a single straight incision. The head and fragments of four inches of the shaft were removed. The wound was closed, by sutures and adhesive strips. The following day the patient rode twenty-two miles in an ambulance to the Cavalry Corps Hospital, and was transferred a few days subsequently to Columbian College Hospital, at Washington. In the middle of January, 1864, an abscess formed in the deltoid region, and a small fragment of necrosed bone was eliminated. By the end of January the wound was entirely healed.

On March 25th, 1864, the hospital report states that Erving could slightly flex the left fore-arm, and that the power of pronation and supination and of moving the hand was perfect.

Erving was discharged from service, September 26th, 1864. On June 25th, 1865, he visited the Army Medical Museum, and a photograph was then taken to accompany the specimen. He had little motion at the left shoulder-joint; but the movements of the fore-arm were unimpaired.

Photographed at the Army Medical Museum,

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SPECIMEN NO. 565. *Upper extremity of Left Femur showing a Perforation between the Trochanters by a Conoidal Musket Ball.*

Captain James M. L——, Co. I, 20th Indiana Vols., was admitted into Columbia College Hospital, at Washington, June 29th, 1862, with two gunshot wounds, received a day or two previously, in one of the battles before Richmond.

The first wound was through the lumbar muscles of the left side. After receiving it the officer fell, and while lying on the field, he was again struck by an elongated musket ball, which entered on the outer side of the left thigh, a little below the great trochanters, and, passing upwards and inwards, lodged.

A finger could be readily passed into the perforation in the femur, but the ball could not be reached. Three formal attempts to ascertain its position and accomplish its removal were made unsuccessfully.

The patient died from exhaustion on August 19th, 1862. At the autopsy, the ball was found in the position in which it is fixed in the specimen, the apex pointing to the wound of entrance. The near proximity of the ball had not induced any disease of the hip-joint.

The specimen and the facts relating to it were contributed by Assistant Surgeon William M. Notson, U. S. Army.

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PHOTOGRAPHIC SERIES, No. 58.—*Case of Corporal Bemis, thrice severely wounded in Three Battles.*

Private Edson D. Bemis, Co. K, 12th Massachusetts Vols., was wounded at Antietam by a musket ball, which fractured the shaft of his left humerus. The fracture united kindly, with very slight angular displacement and a quarter of an inch shortening.

Promoted to be corporal, Bemis received May 6th, 1864, at the battle of the Wilderness, a wound from a musket ball, in the right iliac fossa. He was treated in the Chester Hospital, near Philadelphia. There was extensive sloughing about the wound, but it ultimately healed entirely, leaving a large cicatrix, parallel with Poupart's ligament. Eight months after the injury, Bemis returned to duty with his regiment.

On February 5th, 1865, Corporal Bemis was again severely wounded at the engagement at Hatcher's Run, near Petersburg, Virginia. A musket ball fractured the squamous portion of the left temporal bone, and the patient states that the surgeons found it lodged in the substance of the left cerebral hemisphere, whence it was extracted, together with several fragments of bone, on February 8th, 1865.

The photograph was taken July 15th, 1865. The wound in the head was then nearly healed. There was a slight discharge of healthy pus from one point. The pulsations of the brain could be felt and seen under the integument. The mental and sensory faculties were unimpaired. The Corporal had been discharged from service, and recommended for a pension.

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PHOTOGRAPHIC SERIES, No. 59.—*Resection of Portions of the Metacarpus and Carpus, and of the Lower Extremity of the Ulna.*

Major C. W. Hobbs, 7th New York Heavy Artillery, was wounded at Cold Harbor, Virginia, June 3d, 1864, by three musket balls. One inflicted a flesh wound of the left thigh, passing across the popliteal space, close to the hamstring tendons. A second fractured the third and fourth metacarpal bones of the left hand, and made its exit near the wrist. The third entered the left hand between the distal extremities of the first and second metacarpals, comminuted the second and third metacarpals, the ulneiform and cuneiform bones, and the lower extremity of the ulna, and made its exit on the outer side of the forearm.

Primary excision was performed by Surgeon J. E. Pomfret, 7th New York Heavy Artillery. Two inches of the distal extremity of the ulna were removed, with the fractured bones of the carpus and metacarpus, and three outer fingers. The case progressed without any untoward complication, and recovery was complete in two months.

The photograph was taken July 7th, 1865. The remaining portion of the radio-carpal articulation was not aneelyosed, and the movements of the thumb and fore-finger were unimpaired.

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PHOTOGRAPHIC SERIES No. 61. *Thigh Stump from which a Cylindrical Sequestrum has been extracted.*

Private William Cotter, æt. 27, Co. E, 9th New Hampshire Vols., underwent primary amputation of the right thigh at the lower part of the middle third, on account of gunshot fracture of the lower third of the femur, at Petersburg, Va., July 30th, 1864. The operator made a long posterior skin flap, which was turned up and attached anteriorly by sutures.

On August 3d, 1864, the patient was admitted to Douglas Hospital, at Washington. The stump was swollen from the retention of pus by the bag-like flap. Two sutures were removed and an incision was made in the dependent portion of the flap, and the stump was poulticed.

On August 13th, the swelling was much reduced and the constitutional irritation had greatly abated; the ligature from the femoral artery came away on that day.

On November 29th, 1864, the wound was cicatrized with the exception of a small fistulous orifice, through which dead bone had been felt for two months previously. An incision was made here and a cylindrical sequestrum, nearly six inches long, was extracted. (Specimen 252, A. M. M.). The sequestrum was surrounded, as usual in such cases, by a thick shell of new bone. Within it, near the middle, was a beautiful transparent osseous flake.

The patient was photographed, July 16th, 1865. The fistula in the stump had not entirely healed. Various stimulating injections had been unsuccessfully employed. The patient's general health was excellent.

The facts of the case were communicated by Assistant Surgeon Wm. F. Norris, U. S. A.

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SPECIMEN NO. 1820.—PHOTOGRAPHIC SERIES, No. 62. *Gunshot Fracture of the Head of the Left Humerus, successfully treated without Excision or Amputation.*

Private James Keenan, aged 37 years, Co. H, 66th New York Vols., was wounded May 12th, 1864, at the battle of Spottsylvania, by a musket ball, that entered a little below and in front of the acromion process of the left scapula, and, passing inwards and downwards, comminuted the head of the humerus, and made its exit at the posterior fold of the axilla.

On May 28th, 1864, the patient arrived at Douglas Hospital, at Washington. The constitutional condition was satisfactory. The wounds were discharging pus mixed with synovia quite freely. A digital exploration indicated that the head of the humerus was almost pulverized: but that there were no considerable fissures extending into the diaphysis.

Upon consultation, it was decided to make a free incision into the joint to permit the removal of fragments and a free discharge from the wound. But the patient earnestly deprecated any operative interference, and, in obedience to his wishes, he was put to bed and allowed a generous diet; while, except to keep the arm at rest, to facilitate free discharge from the wounds, and to apply dressing of cold water, no local treatment was instituted.

Under these measures, the patient steadily improved. Fragments of necrosed bone occasionally came away. As convalescence progressed, passive motion of the joint was made whenever the wounds were dressed. On January 20th, 1865, the wounds were entirely healed. The patient had good use of his arm, and could perform most varieties of manual labor. The power of the deltoid was unimpaired, yet there was sufficient ankylosis to prevent the patient from putting his hand to his head, or raising his elbow to a level with the shoulder.

The result is certainly more satisfactory than the average result in excisions of the head of the humerus.

The photograph was taken, July 9th, 1865. The history of the case was furnished by Assistant Surgeon Wm. F. Norris, U. S. A.

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SPECIMEN No. 1395.—PHOTOGRAPHIC SERIES, No. 63. *Recovery, without Amputation, after a Gunshot Wound through the Right Knee-joint.*

Private Peter Stuck, Co. E, 116th Penn. Vols., et. 18, was wounded on May 12th, 1864, at the battle of Spottsylvania, and was admitted, on May 18th, to Douglas Hospital, in Washington. The projectile, which was probably a conoidal musket ball, had entered at the inner edge of the right patella, passed directly through the articulation, and made its exit near the centre of the popliteal space. The inner condyle was slightly grooved; but the ball passed mainly through the intercondyloid notch. There was an abundant thin discharge of mingled pus and synovia. The joint was somewhat swollen, but the inflammatory symptoms and constitutional disturbance were moderate. The patient was of a delicate organization.

The treatment was limited to rest and water dressings.

On June 9th, there was swelling and pain in the joint and a febrile re-action. Poultices were applied to the wound of exit, the anterior wound having healed. In a few days the bad symptoms abated.

In the latter part of August, 1864, the patient began to walk about on crutches, the leg being flexed at an angle of 135° with the thigh. In October, the limb was bandaged to a moveable angular splint, and the flexion was gradually reduced. Almost complete extension was obtained without exciting inflammation in the joint. The patient kept his bed during this period of the treatment.

For the following eight months, nothing of special interest transpired. There were several attacks of inflammation of the joint; but they were moderate in degree and were readily subdued by poulticing. On such occasions, abscesses sometimes formed in the thigh.

For the greater part of the time, the patient's appetite was fair, his bowels regular, his sleep refreshing. When inflammatory mischief was threatened, poultices, hot fomentations with flannel covered with oiled silk, and applications of tincture of iodine were employed. At other times, cold water dressings with charpie to absorb the discharge were used. Ice was never applied.

The photograph was taken, July 9th, and the patient was discharged from service and the hospital, July 14th, 1865. The posterior wound was still open, and a probe could be introduced through it for three inches. There was a large deposit of new bone. The patella was firmly ankylosed to the femur.

The facts of the case were compiled by Acting Assistant Surgeon Henry Gibbons, Jr., U. S. A., and forwarded by Assistant Surgeon Wm. F. Norris, U. S. A.

Photographed at the Army Medical Museum,

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Br't Lt. Col. and Surg. U. S. V., Curator A. M. M.

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PHOTOGRAPHIC SERIES, No. 64.—*Recovery, without Amputation,
after Gunshot Fracture of the Right Patella.*

Private G. W. Warrington, Co. C, 110th Ohio Vols., was wounded on April 2nd, 1865, at Petersburg, Virginia, by a round ball from a spherical case shell. The ball entered the centre of the patella, and, producing a stellate fracture of that bone, passed downwards, backwards, and inwards, and was cut out, on the field, one and a half inches below the tuberosity of the tibia.

On April 12th, 1865, the patient was admitted into Judiciary Square Hospital, at Washington. There was no pain in the knee-joint, and but little swelling. The treatment had been limited to dressings of cold water, which were continued for a few days, and followed by applications of ice.

The patient was removed to Douglas Hospital, June 19th, 1865, when three small necrosed fragments of the patella were removed.

The photograph of the case was taken, July 9th, 1865. The wounds had healed, and the patient walked about with a cane. There was at no time any indication of the formation of pus within the joint.

The facts of the case were communicated by Acting Assistant Surgeon H. S. Colton, U. S. A.

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SPECIMEN NO. 563.—PHOTOGRAPHIC SERIES NO. 65. *Recovery after a Penetrating Wound of the Abdomen with Fracture of the Left Os Ilium.*

Private John Bar, Co. E, 76th New York Vols., aged 45 years, was admitted into Douglas Hospital, at Washington, May 18th, 1864, with a penetrating gunshot wound of the abdomen, received on May 9th, at the battle of the Wilderness.

A conoidal musket ball had entered at the junction of the left twelfth rib with its cartilage, and, passing downwards, backwards, and outwards, through the ilium, lodged in the gluteal muscles, whence it was removed by incision.

On admission, the wound copiously discharged a thin translucent fluid, resembling diluted bile, which evidently came from the small intestine, for, among other reasons, it had no fecal odor. Were further proof of the origin of the discharge required, it would be furnished by the fact that three ascarides lumbricoides escaped from the wound during the second and third weeks of the treatment. The discharge for nine days prior to admission was, according to the patient, similar to that above noted.

The patient was kept perfectly quiet, in a recumbent posture. The discharge from the wound was facilitated, large masses of charpie being used to absorb it. For several weeks the patient was nourished solely by milk, milk punch, and beef tea. His appetite was poor, his sleep much disturbed by cough. But there was no abdominal pain or tenderness, and, at no time, throughout the treatment, was there any symptom of peritoneal inflammation.

On May 22d, a soap and water enema was administered without result. Nothing more was attempted in this direction, as the patient was doing well and nature seemed competent to meet every indication.

On June 3d, the discharge had entirely ceased, and the patient was much improved. On June 6th, he had a large alvine evacuation, the first since May 9th. On May 11th, with the aid of an enema, he had another large defecation. From this time he improved rapidly.

On August 16th, a fragment of necrosed bone, that could be recognized as a portion of the ilium, was removed from the wound in the gluteal region. About the same period bits of necrosed cartilage were taken from fistulous orifices opening near the wound of entrance. The bowels were disposed to costiveness, and flatulence was troublesome. Early in October, there was an attack of dysentery which lasted one week.

On May 5th, 1865, a needle shaped bit of bone escaped from the wound of entrance. On May 8th, both wounds were entirely healed.

On July 16th, the photograph was taken. The patient was in good health, suffering only from occasional attacks of flatulency.

The facts of the case were drawn up by Acting Assistant Surgeon Henry Gibbons, Jr., U. S. A., and forwarded by Assistant Surgeon Wm. F. Norris, U. S. A.

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PHOTOGRAPHIC SERIES, No. 66. *Successful Excision of the Head of the Left Humerus.*

Private Charles Ross, Co. H. 90th Penn. Vols., aged 19 years, was admitted to Douglas Hospital, at Washington, on May 14th, 1864, with a comminuted gunshot fracture of the head of the left humerus, received on May 10th, in action near Spottsylvania, Va.

The head of the humerus was completely shattered by a musket ball; but there was no injury of the shaft. There was much irritative fever, and copious suppuration. It was determined to excise the head of the humerus, and the operation was done, under ether, through a single vertical incision, by Assistant Surgeon Wm. Thomson, U. S. A. There was little loss of blood, and the patient promptly re-acted and then steadily improved.

By the 20th of September, 1864, the wounds had healed completely. The patient had a very useful arm. The elbow-joint, forearm and hand were as good as on the uninjured side.

The photograph was taken July 19th, 1865. At that date, the patient had not acquired much power over the movements of his arm; but he could raise his hand to his mouth, and the result compared very favorably with the average results in excisions of the head of the humerus. He was able to do good service as an attendant in the kitchen and hospital from November, 1864, till August 21st, 1865, when he was discharged from service. The excised head of the humerus is numbered: Specimen 4278, A. M. M.

The history of the case was compiled by Assistant Surgeon Wm. F. Norris, U. S. A.

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PHOTOGRAPHIC SERIES, No. 67. *Partly Consolidated Gunshot Fracture of the Trochanters of the Left Femur.*

Private Isaac Wetzel, Co. I, 184th Pennsylvania Vols., aged 21 years, was wounded on October 3d, 1864, near Petersburg, Va, by a conoidal musket ball, which entered the anterior portion of the left thigh, at a level with the trochanters, and, having fractured the femur very high up, made its exit through the left nates.

The patient was taken to Washington, and was treated at Armory Square Hospital, by Hodgen's apparatus, without extension.

On June 1st, 1865, the fracture had apparently firmly united, with three and a quarter inches shortening. The limb was everted, and the knee-joint stiffened by false ankylosis.

On July 6th, 1865, the patient was conveyed in an ambulance to the Army Medical Museum, and the limb was photographed. The wounds were still open, and discharged an ounce of pus daily. The patient's general health was satisfactory. He was still unable to walk, even with the aid of crutches.

The particulars of the case were furnished by Acting Assistant Surgeon H. A. Robbins, U. S. A.

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PHOTOGRAPHIC SERIES, No. 68. *United Gunshot Fracture of the Middle Third of the Right Femur.*

Private John H. Green, Co. E, 14th New York Heavy Artillery, aged 47 years, was wounded, June 1st, 1864, near Bermuda Hundreds, Va., by a conoidal musket ball, which passed through his right thigh, comminuting the shaft of the femur.

He was conveyed to Washington, and was admitted to Armory Square Hospital, June 15th, 1864. He was treated by Hodgen's apparatus, without extension.

During March, 1865, several fragments of bone were extracted without enlarging the wounds. One of them was two-and-a-half inches in length.

In June, 1865, the fracture was found to be united, with five and a half inches shortening, much angular deformity, and inversion of the foot. There was little motion at the knee-joint. The wounds were still open, and discharged about an ounce of laudable pus, on the average, in twenty-four hours.

On July 6th, 1865, the photograph was taken, and the following day the patient was transferred to the U. S. A. General Hospital at Albany, New York. His general health was excellent.

The particulars of the case were furnished by Acting Assistant Surgeon H. A. Robbins, U. S. A.

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PHOTOGRAPHIC SERIES, No. 69. *United Gunshot Fracture of the Upper Third of the Right Femur.*

Private J. E. Norwood, Co. H. 9th Georgia (Rebel) Regiment, was wounded on February 14th, 1865, near Lee's Mills, Va., by a conoidal musket ball, which entered the right thigh opposite the trochanter minor, and, passing forwards and downwards, fractured the femur, and made its exit anteriorly at the junction of the middle with the upper third of the thigh.

Norwood was captured, and conveyed to Washington, and admitted to Armory Square Hospital, on March 23d, 1865. There was not much constitutional disturbance, and the suppuration was moderate. Buck's method of treatment was adopted. The case progressed without any unfavorable complications, and, by June 25th, there was firm union of the fracture, and the patient was enabled to walk about on crutches.

On July 15th, 1865, the patient was photographed at the Army Medical Museum. The fracture was firmly consolidated, with little more than one inch shortening. The anterior wound was still open, and discharged a little healthy pus. The general condition of the patient was encouraging.

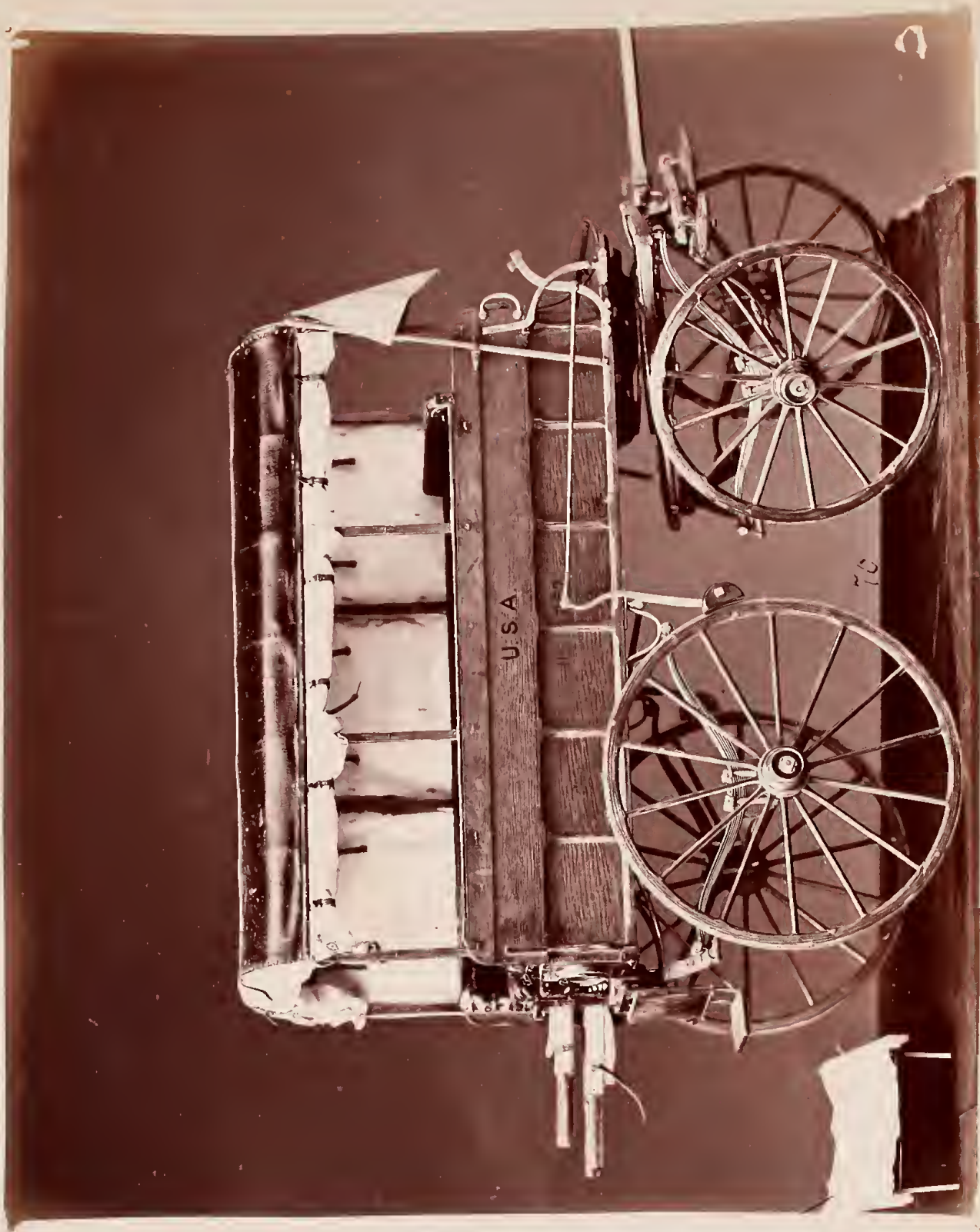
The facts of the case were communicated by Acting Assistant Surgeon Geo. K. Smith, U. S. A.

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PHOTOGRAPHIC SERIES, No. 70. *Model of a Modification of the Ordinary Two-horse Ambulance employed in the U. S. Army.*

Several improvements in the two-horse ambulance, sometimes known as the "Wheeling Ambulance," which has been so generally employed in our armies during the late war, were originated by Brevet Col. C. H. Tompkins, U. S. A., and Surgeon T. H. Hewson, U. S. V., and were embodied in a model which was presented to the Army Medical Museum by Col. Tompkins.

The improvements consisted chiefly in the arrangement of the springs. It is believed that no ambulances of this pattern have been constructed.

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PHOTOGRAPHIC SERIES NO. 71. *United Gunshot Fracture of the Shaft of the Right Femur.*

Private Henry Shelter, Co. D, 7th Wisconsin Vols., was wounded by a conoidal musket ball, March 31st, 1865, at Stony Creek, Virginia. The ball entered the external portion of the right thigh, a little below the middle, fractured the femur, and lodged.

Shelter was admitted to Armory Square Hospital, at Washington, April 5th, 1865. On April 19th, the ball was detected beneath the integument, on the inner part of the thigh, two inches below the perineum, and was removed. The limb was then bandaged, supported by sand-bags, and extended by a weight and pulley. The constitutional disturbance was slight, and the discharge from the wounds moderate. A few necrosed fragments of bone were removed.

On July 5th, the patient was able to ride in the invalid chair, and, a few days subsequently, he walked on crutches. On July 16th, the photograph was taken. There was still a slight discharge from the wound of entrance. The injured limb was shortened one inch. The patient's general health was excellent. He was about to be transferred to Madison, Wisconsin.

The facts were communicated by Acting Assistant Surgeon George K. Smith, U. S. A.

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SPECIMEN No. 2697 — PHOTOGRAPHIC SERIES No. 72. *United Gunshot Fracture of the Middle Third of the Left Femur.*

Sergeant Anson Rider, Co. B, 121st New York Vols., was wounded by a conoidal musket ball, on April 2d, 1865, in an engagement on the Southside Railroad, near Petersburg, Va. The ball struck the left thigh, in front, six inches above the patella, fractured the shaft of the femur, and lodged.

He was transferred from the Base Hospital, at City Point, to Washington, as soon as practicable, and was admitted to Armory Square Hospital, on April 12th. There was but slight constitutional disturbance, and the discharge from the wound was very moderate in quantity. The injured limb was shortened an inch and a quarter. The position of the ball could not be ascertained. The patient was treated on Dr. Gardon Buck's plan.

On June 9th, the wound was healed, but bony union was still incomplete. Extension by means of weights was continued.

On July 8th, the femur was firmly consolidated, and the patient was allowed to rise and walk about on crutches. On July 25th, 1865, he was taken to the Army Medical Museum, and photographed. The injured limb was shortened less than an inch. The general health was good.

The case was treated by Acting Assistant Surgeon George K. Smith, who communicated the facts relating to it.

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SPECIMEN No. 2461.—PHOTOGRAPHIC SERIES, No. 73. *United Gunshot Fracture of the Shaft of the Right Femur.*

Corporal David A. Smith, Co. I, 20th Mass. Vols., was wounded on February 5th, 1865, at Hatcher's Run, Va., by a conoidal musket ball, which entered the middle of the external surface of the right thigh, fractured the femur, and made its exit from the inner and posterior aspect of the thigh.

He was admitted into the Second Corps Hospital, and was treated by Buck's method, for six weeks. Extension was made by a weight of sixteen pounds.

He was transferred to Armory Square Hospital, at Washington, March 18th, 1865. The fracture gradually united with four inches shortening, and very considerable angular deformity. On April 30th, the patient fell from his chair, and fractured the imperfectly consolidated callus. The opportunity was embraced to straighten the limb, and to employ as much extension as the patient could bear.

On July 25th, 1865, the photograph was taken. The man was discharged from service the same day. The fracture had firmly united, with three inches shortening. There was still a small fistula and a slight purulent discharge. The general health was remarkably good.

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SPECIMEN No. 1424.—PHOTOGRAPHIC SERIES. No. 74. *Aorta, Cava, and Branches, showing a Ligation of the Common Iliac Artery.*

Private George Clark. Co. I, 4th New Jersey Vols., was admitted into the Warrenton Field General Hospital, in August, 1863, on account of a swelling of the left thigh, which was supposed to be due either to a malignant tumour or to an aneurism, resulting from a wound of the vessel, eight years previously, by the blade of a pocket-knife.

He was transferred to Washington, and thence to the Ward Hospital at Newark, New Jersey, where he was admitted on October 13th, 1863.

On February 6th, 1864, the left external iliac was tied, by Acting Assistant Surgeon J. B. Cutter, U. S. A., by direction of Surgeon George Taylor, U. S. A. After the operation the tumour diminished in size, and for several weeks a cure was anticipated; subsequently, the swelling gradually returned, and in September, 1864, it was greater than before the operation.

On September 17th, 1864, a ligature was placed on the trunk of the common iliac. The patient survived the operation five days and died of peritonitis.

The autopsy showed that the disease was aneurismal varix, the communication between the femoral artery and the enlarged vein being at the lower part of Scarpa's triangle. The femoral vessels were not preserved.

The injected specimen was forwarded by Assistant Surgeon Clinton Wagner, U. S. A., and is numbered 3597, A. M. M. A detailed account of the first operation is published in the American Journal of the Medical Sciences, Vol. XLVIII, page 36.

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Lieut W.C. Weeks
5th Mich Cavalry

125

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SPECIMEN No. 484.—PHOTOGRAPHIC SERIES No. 75. *Successful Amputation at the Left Ankle, by the Method of Pirogoff.*

Lieut. W. C. Weeks, Co. I, 5th Michigan Cavalry, was wounded April 1st, 1865, at the battle of Five Forks, by a conoidal musket ball, which passed through his left ankle joint. He was immediately carried to the hospital at City Point, and amputation at the ankle was performed, on the same day, by Surgeon St. Clair, 5th Michigan Cavalry. The articulating surfaces of the tibia and calcaneum were removed, and the cut surfaces were brought into apposition.

On April 16th, 1865, the patient was transferred to Armory Square Hospital, at Washington. On admission, he was in a feeble condition. An erysipelatous blush extended above the knee on the injured side; an abscess had formed in the lower part of the leg; and no union of the flap had taken place.

With the employment of stimulants and nutritious diet with emollient applications to the limb, there was a gradual improvement until April 28th, 1865, when symptoms of pyæmic infection supervened. Rapidly recurring chills, an icteroid coloration of the skin and conjunctiva, anorexia, and a frequent feeble pulse suggested the gravest prognosis. Energetic treatment was adopted. An ounce of brandy was given every two hours, and quinia, sesquichloride of iron and beef tea were freely administered. On May 6th, the grave symptoms began to subside, and, by the end of the month, the patient was fairly convalescent.

On June 26th, the patient was pronounced well. The os calcis had firmly united to the tibia, and there was a good solid stump. A cast in plaster was taken of it, (A. M. M., Spec. 2298) and a few days subsequently, a photograph.

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SPECIMEN No. 4279.—PHOTOGRAPHIC SERIES, No. 76. *United Gunshot Fracture of the Upper Third of the Right Femur.*

Corporal Thomas Crossley, Co. E, 69th New York Vols., was wounded March 25th, 1865, in the assault on Fort Steadman, near Petersburg, Va., by a musket ball, that fractured the upper third of the right femur.

The patient was admitted to Armory Square Hospital, at Washington, April 1st. He progressed very favorably, and, by mid-summer, the fracture was firmly united with slight deformity, and only one inch shortening.

The photograph was taken July 20th, and on July 25th, 1865, Crossley was discharged from service.

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SPECIMEN No. 231.—PHOTOGRAPHIC SERIES, No. 77. *United
Gunshot Fracture of the Middle Third of the Right Femur.*

Private John W. Hutchinson, Co. G, First Maine Veteran Vols., was wounded at the battle of the Wilderness, May 5th, 1864, and admitted into Army Square Hospital, on May 26th, with a comminuted gunshot fracture of the middle third of the right femur.

The photograph was taken July 20th, 1865. There was still a slight discharge; but the fracture was firmly united, with two inches shortening, and the patient's general health was excellent.

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SPECIMEN NO. 375.—PHOTOGRAPHIC SERIES, No. 78. *Recovery, without Amputation, after a Gunshot Fracture of the Head of the Left Tibia, involving the Knee-joint.*

Lieut. Thomas W. Robertson, 79th New York Vols., was wounded, on June 16th, 1862, in the assault on the works on James Island, South Carolina, by a musket ball, which struck the outer side of the head of the tibia, and passed upwards and lodged, as was believed, in the intercondyloid notch of the femur, or somewhere about the knee-joint.

Amputation of the thigh was advised but refused by the patient. The limb was then placed in an easy position and cold water dressings were applied.

On June 28th, the patient was sent to New York. On July 6th, there was profuse hemorrhage from the anterior tibial artery. On July 8th, the femoral artery was tied by Professor Willard Parker. At this date, the knee-joint was excessively swollen, and there was free suppuration from the wound.

After a very protracted confinement, the patient ultimately recovered, with complete ankylosis of the knee-joint, the straight position of the limb being preserved.

Lieut. Robertson was transferred to the Veteran Reserve Corps, on February 29th, 1864, and was on duty at Emory Hospital, at Washington, in 1865. On July 18th, 1865, the photograph was taken.

The facts of the case were communicated by Surgeon N. R. Mosely, U. S. Vols., who reported that Professor Parker and the other surgical advisers of Lieut. Robertson, entertained no doubt that the knee-joint was primarily involved in this case. The exact location of the ball was never ascertained.

Photographed at the Army Medical Museum,

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SPECIMEN No. 3400.—PHOTOGRAPHIC SERIES, No. 79. *Shell*

Wound of the Face, with great Destruction of the Soft Parts.

Private Joseph Harvey, Co. C, 149th New York Vols., was wounded at the battle of Chancellorsville, May 3d, 1863, by a fragment of shell. The right eye was destroyed, the right superior maxilla was fractured, a fragment was chipped off the lower jaw, and the right cheek was frightfully lacerated.

The patient fell into the hands of the enemy, and remained a prisoner eleven days.

In the middle of June, 1863, he was admitted into Mansion House Hospital at Alexandria. In August, portions of exfoliated bone were removed. A ferrotype, representing the appearance of the wound at this date, was forwarded to the Army Medical Museum.

On May 7th, 1865, Harvey was discharged from service on account of physical disability. He was subsequently employed as a night-watchman at the Commissary Hospital in Alexandria.

The photograph was taken June 32d, 1865. The loss of substance in the cheek was still unrepaired, and liquids and saliva escaped from it. There was slight deafness and partial facial paralysis on the right side.

Photographed at the Army Medical Museum,

BY ORDER OF THE SURGEON GENERAL:

GEORGE A. OTIS,

Br't Lt. Col. and Surg. U. S. V., Curator A. M. M.



SURGICAL PHOTOGRAPH NO.

Prepared under the supervision of
ASSISTANT SURGEON GEORGE A. OTIS, U. S. A.
BY ORDER OF THE SURGEON GENERAL.

WAR DEPARTMENT.
SURGEON GENERAL'S OFFICE, ARMY MEDICAL MUSEUM.

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SPECIMEN No. 3153.—PHOTOGRAPHIC SERIES. No. 80. *United Gunshot Fracture of the Inferior Maxilla.*

Private Ferdinand Lauersdorf, Co. D, 6th Wisconsin Vols., aged 28 years, was wounded, on March 31st, 1865, in an engagement on the Southside Railway, near Petersburg, Virginia, by a fragment of shell which struck the body of the lower jaw, and tore away the entire anterior portion of the bone.

The photograph was taken July 14th, 1865. The fractured extremities of the jaw had united, and the wound had nearly healed. The movements of the jaw were very limited, but deglutition was but slightly interfered with.

The patient had been discharged from service, and was on his way to his home in Watertown, Jefferson County, Wisconsin.

Photographed at the Army Medical Museum,

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PHOTOGRAPHIC SERIES, No. 81. *Recovery after a Perforating Gunshot Wound of the Abdomen producing Artificial Anus.*

Lieut. G. P. Deichler, Co. I, 69th Pennsylvania Vols., aged 22 years, was wounded by a conoidal musket ball, at Hatcher's Run, Va., in March, 1865. The ball entered the right iliac region, and, passing through the ascending colon, made its exit a little to the left of the last dorsal vertebra.

The patient was taken to a field hospital, and from thence to Armory Square Hospital, at Washington, where he was admitted on April 1st, in an exhausted condition, with grave symptoms of peritonitis. There was a copious fecal discharge from both wounds. Appropriate dressings were applied, a fourth of a grain of sulphate of morphia was ordered to be given every second hour, and stimulants were directed.

On April 7th, sloughs separated from both wounds, and left a clean granulating surface. A large piece of sphacelated omentum was removed from the anterior wound.

The opiate treatment was continued till April 27th, when there was a fecal evacuation by the anus, for the first time after the injury.

On June 12th, the discharge from the wounds was very slight. The edges of the wounds were now refreshed and approximated by adhesive strips.

On August 10th, the anterior wound was firmly healed. There was a small fistulous sinus at the posterior wound, discharging pus scantily. On this day the photograph was taken, and the patient left the hospital for his home in excellent general health.

The particulars of the case were communicated by Acting Assistant Surgeon Charles A. Searle, U. S. A.

Photographed at the Army Medical Museum,

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PHOTOGRAPHIC SERIES, No. 82.—NEGATIVE, No. 4280. *Necrosis of the Shaft of the Left Tibia, resulting from a Gunshot Injury.*

Private Henry Rall, Co. D, 4th New York Heavy Artillery, aged 22 years, was wounded at Old Church, Va., May 30th, 1864, by a musket ball, which struck the spine of the left tibia, four inches below the knee, and denuded the bone of its periosteum.

On admission at Stanton Hospital, in Washington, the injured limb was found to be much swollen and inflamed. In July, free incisions evacuated a large collection of pus and revealed the existence of extensive necrosis of the shaft of the tibia.

In the spring of 1865, the sequestrum was found to be detached and moveable, and, on March 14th, an operation was performed for its removal, a sufficient aperture being chiseled in the involucrum. This very large sequestrum is numbered 4337 in the Museum Collection.

On June 6th, 1865, Rall was discharged from service on a certificate of physical disability. The wound was not entirely healed; but the patient could walk with ease and comfort.

In July the photograph was taken. Rall was at this time engaged as a contract nurse at the Stanton General Hospital.

The particulars of the case were furnished by Surgeon Benjamin B. Wilson, U. S. Vols.

Photographed at the Army Medical Museum,

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SPECIMEN No. 2241.—PHOTOGRAPHIC SERIES, No. 83. *United
Gunshot Fracture of Middle Third of Left Femur.*

Private George Bauer, Co. C, 15th New York Heavy Artillery, was wounded on April 1st, 1865, near Hatcher's Run, Va., by a conoidal musket ball, which entered the external aspect of the left thigh at the junction of the upper and middle thirds, fractured the femur, and emerged on the opposite side an inch lower than the point of entrance.

On admission at Armory Square Hospital, April 4th, 1865, he was treated by Buck's apparatus, with a weight of eleven pounds. On June 23d, there was firm union of the fracture, though the wounds still discharged freely.

An August 10th, the photograph was taken. The wounds had nearly healed, and the discharge was very scanty. The limb was shortened one inch without other deformity. The patient walked about comfortably on crutches. On August 17th, he was transferred to Douglas Hospital.

The facts of the case were communicated by Acting Assistant Surgeon G. K. Smith, U. S. A.

Photographed at the Army Medical Museum,

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SPECIMEN NO. 4150.—PHOTOGRAPHIC SERIES, No. 84. *United Gunshot Fracture of the Shaft of the Right Femur.*

Sergeant William Brown, Co. H, 69th Penn., Vols., aged 24 years, a man of vigorous constitution, was wounded at Hatcher's Run, Va., March 25th, 1865, by a conoidal musket ball that entered the posterior aspect of the right thigh, two inches below the level of the trochanter margin, fractured the femur, and made its exit a little outside of the femoral vessels, four inches below Poupart's ligament.

The patient was conveyed to Army Square Hospital, at Washington, where, on April 4th, the anterior wound was enlarged, and five large fragments of bone were removed, the patient being under the influence of chloroform. The fragments are numbered, A. M. M., Specimen 4143.

The case progressed very favorably, and on August 7th, 1865, the femur was found to be firmly united, with three inches shortening. At this date the photograph was taken, the patient being ordered to be transferred to the Mower Hospital at Philadelphia. There was still a slight purulent discharge.

The history of the case was communicated by Acting Assistant Surgeon George K. Smith, U. S. A.

Photographed at the Army Medical Museum,

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SPECIMEN No. 2345.—PHOTOGRAPHIC SERIES, No. 85. *Simple Fracture of the Middle Third of the Left Femur, United without Deformity.*

Lieut. A. W. Starkweather, 6th Indiana Cavalry, was thrown from his horse, at Black and White Station, Va., on April 28th, 1865, and the shaft of his left femur was fractured.

He was admitted to Armory Square Hospital, on May 7th, and was treated by Buck's method of extension by a weight and pulley, until June 7th; a dextrine bandage was then substituted. In the latter part of June, the patient began to walk about with the aid of crutches.

The photograph was taken early in August, 1865. The fracture was then firmly consolidated without deformity, and with very slight shortening. The case was selected as an interesting illustration of a successful result in a simple fracture of the femur.

The facts were communicated by Acting Assistant Surgeon C. B. Porter, by whom the treatment was conducted.

Photographed at the Army Medical Museum,

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SPECIMEN NO. 809.—PHOTOGRAPHIC SERIES, No. 86. *Left Scapula, showing a Gunshot Fracture nearly parallel with the Spine of the Scapula, with two Fragments of a Conoidal Musket Ball.*

Private William Fuller, Co. F, 18th Massachusetts Vols., aged 30 years, was wounded at the second battle of Bull Run, August 30th, 1862, by a conoidal musket ball, which entered to the left of the spinal column, and passing outwards, traversed the body of the scapula and the muscles of the upper part of the arm.

The patient was conveyed to Union Chapel Hospital at Alexandria. On the 3d, and again on the 5th of September, misshapen pieces of ball and a few fragments of bone were extracted through an incision on the outer edge of the scapula.

On September 19th, symptoms of purulent infection were manifested. An active treatment by stimulants, quinia, iron, and ammonia, was instituted, but unavailingly, and on September 25th, 1862, the case terminated fatally.

At the autopsy, a large collection of extravasated blood was found beneath the scapula and between the muscles of the shoulder. There was extensive serous effusion in the left pleural cavity, and numerous metastatic foci in both lungs.

The scapula is numbered: *Specimen 188*, in the Museum Collection.

Full notes of the case were forwarded by Acting Assistant Surgeon W. H. Butler, U. S. A.

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SPECIMEN No. 1586.—PHOTOGRAPHIC SERIES, No. 87. *Button of Bone removed by the Trephine on account of a Deformed Fracture of the Cranium, produced by a Blow from a Stone.*

Private John Rughts, Co. H. 2nd Michigan Vols., aged 41 years, was wounded in a street fight in Washington, on July 17th, 1865, and was admitted into Armory Square Hospital on the afternoon of the following day.

He had four scalp wounds, produced by stones thrown at him. One was over the right frontal eminence and penetrated as far as the aponeurosis of the occipito-frontalis; a second was at the middle of the coronal suture and slightly denuded the pericranium, but no injury of the bone could be detected; a third, in the temporal region, involved the integument only; while the fourth, over the right parietal protuberance, presented a very slight depression of the outer table of the skull, of an irregular shape and of an average diameter of a third of an inch. The patient was conscious, his pulse somewhat accelerated, his voice tremulous, his pupils contracted. He had no nausea and little pain.

He was placed under the influence of ether, and the fracture was exposed by a crucial incision of the scalp. The crown of a large trephine was so applied as to surround the depressed fragment. The button of bone that was removed exhibited a depressed rectangular fragment of the vitreous plate, nearly an inch in length and half an inch in width. The dura mater was uninjured. No unfavorable symptoms followed the operation, and on August 24th, 1865, the patient was transferred to the U. S. General Hospital at Detroit, Michigan. The osseous specimen is numbered 1452, A. M. M., and was forwarded by the operator, Brevet Colonel D. W. Bliss, Surgeon U. S. Vols.

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SPECIMEN No. 1516.—PHOTOGRAPHIC SERIES, No. 88. *Fragment of a Grenade encrusted with Calculous Matter, extracted from the Bladder by Lithotomy.*

Private Conrad Lotes, Co. A, 23d Indiana Vols., aged 32 years, was wounded at Vicksburg, Miss., June 25th, 1863, by a fragment of a hand grenade, which entered the right nates two inches outside of the end of the coccyx, and passed into the bladder, where it lodged. Urine passed by the wound immediately after its reception.

The patient was admitted into the General Hospital at Jefferson Barracks, Missouri, August 5th, 1863. His general health was much impaired. The urine passed mainly by the wound and was largely mixed with pus and blood. The treatment directed comprised warm fomentations, mild diuretics, stimulants and nutritious diet.

On February 20th, 1864, a catheter was with much difficulty passed by the urethra and the presence of a foreign body was ascertained. On March 19th, the general condition was improved; the wound was so far closed as to admit only a large sized probe. Attempts to pass a catheter or to probe the wound caused chills and febrile irritation.

On April 2d, 1864, the lateral operation of lithotomy was performed by Surgeon John F. Randolph, U. S. A., the patient being anæsthetized by equal parts by bulk of chloroform and ether. A rectangular fragment of shell, largely encrusted with earthy phosphates, was extracted. It was two inches in length, seven-eighths of an inch in width and three-eighths of an inch in thickness. It weighed two ounces and five grains, troy.

On April 12th, the urine passed by the wound. On April 27th, the wound had healed, and the patient was soon afterwards restored to his ordinary condition of health.

A detailed report of the case is published in the American Journal of Medical Sciences, Vol. XLVIII, p. 271.

- The encrusted fragment of shell is preserved in the collection of the Army Medical Museum, (Spec. 88). It weighs 898 grains, portions of the phosphatic deposit having crumbled away.

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SPECIMEN NO. 1364.—PHOTOGRAPHIC SERIES, No. 89. *United Gunshot Fracture of the Upper Third of the Right Femur.*

Lieut. James J. Reeder, Co. G, Holcomb's South Carolina (Rebel) Legion, 31 years of age, was wounded at Hatcher's Run, Va., March 29th, 1865, by a conoidal musket ball, which entered near the right external abdominal ring, and, passing downwards, backwards and outwards, made its exit behind the right trochanter major, having fractured the femur at the trochanters and injured the anterior crural nerve.

The patient was made prisoner, and was conveyed to the 5th Corps Hospital at City Point, and was treated with the injured limb on a double inclined plane till May 1st, when he was removed to Washington, and admitted to Armory Square Hospital, on May 2d. It was found that the fracture had united with an inch shortening. There was a large deposit of callus in the trochanteric region. Wound of entrance closed, slight discharge from wound of exit, inability to flex the thigh, and severe pain from passive motion.

On July 15th the patient was able to sit up. Passive motion of the thigh had been frequently insisted on. On August 15th, 1865, the photograph was taken. The patient was able to walk on crutches; but he had still but little control over the flexor muscles of the injured limb. The wounds seemed to be completely healed, and the fracture firmly consolidated.

The facts of the case were furnished by Acting Assistant Surgeon Geo. K. Smith, U. S. A.

Photographed at the Army Medical Museum,

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SPECIMEN NO. 1928.—PHOTOGRAPHIC SERIES, No. 90. *Gunshot Fracture of the Shaft of the Right Femur, united with great Shortening and Deformity.*

Private John Friedrich, Co. F, 127th New York Vols, aged 19 years, was wounded at Honey Hill, South Carolina, November 30th, 1864, by a round musket ball, which entered the internal surface of the right thigh about the middle, fractured the femur, and lodged under the skin opposite the point of entrance, whence it was removed by an incision.

The patient was conveyed to Hilton Head U. S. General Hospital, and was treated for one month with Smith's Anterior Splint, and, afterwards, for four weeks, by Hodgen's apparatus. The limb was then placed in a long fracture box, and so remained until May, 1865, when the patient was transferred to Armory Square Hospital, at Washington.

On admission at Armory Square, May 10th, 1865, the fracture was found to be united, with seven inches shortening, and marked lateral deformity. The knee-joint had but limited motion. The overlapping extremity of the upper fragment presented itself just above the outer condyle of the femur, and the skin was ulcerated at this point, and the end of the bone was exposed.

Two months subsequently the ulceration became phagedænic, and destroyed the skin and fascia over the exterior surface of the thigh. Bromine was applied. By the end of July, there was an healthy granulating surface.

The photograph was taken August 15th, 1865. The ulcer was rapidly cicatrizing, and the general health was good. The fracture was firmly consolidated, and the patient walked on crutches.

Photographed at the Army Medical Museum,

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SPECIMEN No. 1676.—PHOTOGRAPHIC SERIES, No. 91. *Consolidated Gunshot Fracture of the Upper Third of the Left Femur.*

Captain David Lewis, Co. G, 8th Ohio Vols., aged 26 years, was wounded at the battle of the Wilderness, May 6th, 1864, by a musket ball, which entered the external part of the left thigh, about the junction of the upper with the middle third, fractured the femur, and emerged at the nates, two inches to the left of the anus.

He was conveyed to Fredericksburg, and was treated with a double inclined plane for three weeks. He was removed to Washington on May 26th, and was treated, in quarters, by Dr. G. K. Smith, Acting Assistant Surgeon, U. S. A., by Buck's method. There was little suppuration or constitutional disturbance, and, on July 9th, the fracture was so far united as to permit the patient to walk on crutches. On July 13th, Captain Lewis was mustered out of service on account of the expiration of his term. In October, the wounds had entirely healed, and soon afterwards the patient was able to walk on his limb.

On August 22d, 1865, the photograph was taken. The injured limb was shortened one and a half inches, but there was no other deformity. Captain Lewis was in excellent health. He walked without a cane and without limping, and was actively engaged in business in one of the bureaux of the Treasury Department.

Photographed at the Army Medical Museum,

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SPECIMEN No. 664.—PHOTOGRAPHIC SERIES, No. 92. *United
Gunshot Fracture of the Middle Third of the Left Femur.*

Private Jonathan Wallace, Co. F, 21st Georgia (Rebel) Regiment, was wounded in the assault on Fort Steadman in the intrenched lines before Petersburg, on March 25th, 1865.

A conoidal musket ball entered at the external lower portion of the left thigh, passed obliquely upwards and backwards, fractured the femur in the middle third, and made its exit posteriorly.

The patient was made a prisoner, and was treated in a field hospital of the 9th Corps, where several fragments of bone were extracted, until April 8th, when he was conveyed to Washington, and admitted into Armory Square Hospital, April 10th, 1865. The injured limb was here placed in Buck's apparatus, and extension was made by a weight of eleven pounds.

On August 15th, the photograph was taken. The limb was shortened three-fourths of an inch. There was a very slight purulent discharge from the posterior wound. The general health was good, and the fracture was apparently firmly consolidated. On August 17th, 1865, the patient was transferred to Douglas U. S. General Hospital.

The facts of the case were communicated by Acting Assistant Surgeon G. K. Smith, U. S. A.

Photographed at the Army Medical Museum,

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SPECIMEN No. 4293.—PHOTOGRAPHIC SERIES, No. 93. *Recovery after a Penetrating Gunshot Wound of the Abdomen with Perforation of the Left Ilium.*

Major H. A. Barnum, 12th New York Vols., was wounded at Malvern Hill, July 1st, 1862, by a conical musket ball, which entered midway between the umbilicus and the anterior superior spinous process of the left ilium, passed through the middle of the ilium, and emerged posteriorly.

The wound was regarded as fatal and the patient was left in a field hospital.

On July 2d, he was captured and was taken to Libby Prison, a distance of eighteen miles, in an express wagon. On July 17th, he was taken to Aikin's Landing, in an ambulance, a distance of seventeen miles, and exchanged. He was conveyed by water to Albany, and thence by rail to Syracuse, New York. At no time were any symptoms of peritonitis manifested.

On October 1st, Major Barnum went to Albany, where Dr. March dilated the anterior wound by an incision, and extracted several fragments of the ilium, and directed that a tent should be worn.

Promoted to the command of the 149th New York Vols., Colonel Barnum took the field in January, 1863. He wore the tent about a month, when the anterior wound healed. About the middle of March, a large abscess formed and evacuated itself at the site of the anterior wound. In April, Dr. March again cut down to the ilium, and introduced a tent. No loose fragments of bone were found. The Colonel resumed his duties, and commanded his regiment at Gettysburg. In January, 1864, another large abscess formed and discharged posteriorly. The orifice was enlarged by Dr. L. D. Sayre of New York, and a seton of oakum was passed from before backwards through the entire track of the ball. This was worn for several weeks, when Surgeon M. K. Hogan, U. S. Vols., substituted a seton of candle wick, which was gradually reduced in size, and finally replaced by a single linen thread.

The photograph was taken at the Army Medical Museum in August, 1865. The wound still discharged slightly, and the thread seton was still worn.

Promoted to be a brigade commander, General Barnum has been almost continually in the field for the past two years. He participated in the campaigns of Atlanta, Georgia, and Carolina, was shot through the right forearm at Kenesaw Mountain, and received a shell wound of the side at Peach Tree Creek.

Photographed at the Army Medical Museum,

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PHOTOGRAPHIC SERIES, No. 94. *Gunshot Fracture of the Vitreous Table of the Cranium without Fracture of the External Table.*

Private David Pugh, Co. C, 35th Wisconsin Vols., was wounded at Tupelo, Mississippi, July 18th, 1864, by a musket ball, which struck the skull obliquely, and apparently inflicted a scalp wound merely, between the sagittal suture and the left parietal protuberance.

There were no signs of cerebral disturbance. The wound was dressed simply, and the patient was conveyed to Memphis, Tennessee, and admitted into the Adams U. S. General Hospital on July 23d. He was then perfectly rational and free from head symptoms.

Two days subsequently, indications of compression of the brain were observed, and, on the afternoon of the 25th, then had rapidly become aggravated. The pulse was slow, the respiration laboured, the pupils dilated, the sphincters relaxed. A very careful exploration of the wound was made, but, of course, no cranial fracture could be detected. The treatment was limited to cold applications to the head, scarified cups to the nucha, and brisk purging. On the 26th, the patient gradually became comatose. The discharges from the bowels and bladder were involuntary. The patient continued to sink on the 27th, and died at 1, A. M., on the 28th of July.

At the autopsy, the internal table of the left parietal was found to be fractured and depressed at a point corresponding with the wound in the scalp. The dura mater was wounded, and there was a large abscess in the left cerebral hemisphere.

The specimen is preserved in the Army Medical Museum, and is numbered 1568. It was forwarded, with an account of the case, by Acting Assistant Surgeon R. M. Coale, U. S. A.

Photographed at the Army Medical Museum,

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PHOTOGRAPHIC SERIES. No. 95. *Bones of the Right Knee, exhibiting Reparative Attempts after a Gunshot Perforating Fracture of the Head of the Tibia and the Results of Secondary Inflammation of the Knee-joint.*

Private Peter Costello, Co. E, 88th Illinois Vols., was wounded at Mission Ridge, Nov. 25th, 1863, by a musket ball, which entered the inner side of the head of the tibia, an inch and a half below the articular surface, perforated the bone from left to right, and comminuted the head of the fibula.

He was treated at Chattanooga until January 28th, 1864, when he was conveyed to Hospital No. 19, Nashville, Tenn., thence on February 4th, to Hospital No. 7, Louisville, Ky., and finally to the General Hospital, at Madison, Indiana, where he was admitted on April 8th. Hopes were entertained of saving the limb when the patient arrived at Madison, but soon afterwards the discharge became very copious and offensive, abscesses formed about the joint and pus burrowed in the muscles of the thigh, and the patient was prostrated by a colliquative diarrhoea.

In May, 1864, the thigh was amputated at the lower third by Surgeon G. Grant, U. S. Vols. In the middle of July, there was sloughing of the stump, and an application of bromine was made, with benefit, as was believed.

On August 1st, Assistant Surgeon B. McCluer reports the case as likely to recover.

The reports ascribe the injury to the action of a conoidal bullet, but the remarkable absence of longitudinal fissuring and, indeed, of splintering of any sort, seems to preclude this supposition. There is a large deposition of callus about the perforation in the head of the tibia, and the removal of cartilage and destruction of ligaments common in suppurative inflammation of the knee-joint was conspicuous. The Specimen is numbered 3006, A. M. M. The details of the case are compiled from the records of this Office.

Photographed at the Army Medical Museum,
BY ORDER OF THE SURGEON GENERAL:

GEORGE A. OTIS,

Be't Lt. Col. and Surg. U. S. V., Curator A. M. M.



SURGICAL PHOTOGRAPH NO.

Prepared under the supervision of
ASSISTANT SURGEON GEORGE A. OTIS, U. S. A.
BY ORDER OF THE SURGEON GENERAL.

WAR DEPARTMENT.
SURGEON GENERAL'S OFFICE, ARMY MEDICAL MUSEUM.

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PHOTOGRAPHIC SERIES, No. 96. *Ununited Gunshot Fracture of the Upper Third of the Right Femur, Seven Months after the Injury.*

Lieut. Goodwin, Co. E, 4th Minnesota, was wounded at the battle of Iuka, September 19th, 1862, by a conoidal musket ball, which entered behind the neck of the right femur and fractured the shaft of the bone. He was transferred to the City General Hospital, at St. Louis, Missouri, and was treated by simple extension. There was comparatively little reparative effort at the seat of fracture, and the patient died from exhaustion, April 18th, 1863. See Specimen 1325, A. M. M., forwarded with notes, by Surgeon J. T. Hodgen. U. S. Vols.

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PHOTOGRAPH No. 97. *Perforating Gunshot Wound of the Abdomen.*

Private J. D. Smith, Co. D. 28th New York Volunteers, was wounded on May 1, 1863, at Chancellorsville by a conoidal musket ball, fired at a distance of not more than thirty yards. The projectile entered nearly over the left abdominal ring, traversed the abdominal cavity and made its exit at the upper part of the right buttock. He walked an hundred yards after he was hit. There was quite free bleeding from the anterior wound. He was treated in the Twelfth Corps Hospital. There were no symptoms of peritonitis. The appetite was good, the bowels regular, the functions of the bladder perfect. By the 21st of May, his wound was entirely healed, and he was discharged from service by reason of the expiration of his term of enlistment. The drawing was made by direction of Surgeon J. H. Brinton, U. S. V., by Hospital Steward Stauch, U. S. A., a few days after the reception of the wound. The facts of the case were communicated by Surgeon E. Goodman, U. S. V., Medical Director of the Twelfth Army Corps.

Photographed at the Army Medical Museum.

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GEORGE A. OTIS,
Ass't Surg. U. S. A., Curator A. M. M.



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SURGICAL SERIES OF DRAWINGS, No. 17.—PHOTOGRAPHIC SERIES, No. 98. *Great Destruction of the Soft Parts in the Gluteal and Lumbar Regions by a Fragment of Shell.*

Private John E. Tucker, Co. A, 17th Maine Vols., aged 20 years, was wounded, by the explosion of a shell, at the battle of Chancellorsville, May 3d, 1863. The integuments over the gluteal and lumbar regions were torn away, and, on the right side, a large portion of the gluteal muscles were removed. He was admitted to Armory Square Hospital, at Washington, on May 8th. He suffered but little pain, and his appetite was good. He was ordered the best of diet, with porter; lint, wet with a disinfectant lotion, to the wound, and an anodyne at night.

The patient did well till the forenoon of May 15th, when he complained of inability to separate his jaws, and of stiffness of the muscles of the neck. He took a full dose of morphia; but on the following day the trismus was more confirmed, and there was slight opisthotonos. The report makes the contradictory statement, that there was no spasmodic action of the muscles. No trouble in deglutition or respiration. Turpentine stupes were applied to the neck, and the fourth of a grain of sulphate of morphia was given every four hours with milk punch. On May 18th, the jaws could be separated more, and there was less stiffness about the neck. On the 20th, there were frequent involuntary twitchings of the dorsal muscles. The wound was more painful. It was dressed with olive oil on cotton batting, and, later in the day, with a solution of morphia. The internal administration of morphia was continued. On the 21st and 22d, the symptoms continued to amend. The patient could separate his jaws, and protrude his tongue. He had a fourth of a grain of sulphate of morphia every hour, applications of ice to the spine, and the wound was dressed every six hours with a lotion containing six grains of morphia. On the 22d, there was a defecation from the bowels.

From this date the patient steadily improved. On July 10th he received a furlough. He returned to the hospital on Nov. 24th, 1863. He was then able to walk with a cane. On Dec. 5th, 1863, he was examined by Surgeon J. H. Brinton, U. S. Vols. The wound had cicatrized except over a space the size of the palm of the hand, which surface was granulating kindly. The right buttock was flattened and wasted. The gait was feeble and uncertain. The general health appeared to be good.

The date at which the drawing was made by Hospital Steward Stauch, U. S. A., is not recorded nor the date of the patient's discharge from service.

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PHOTOGRAPHIC SERIES, No. 99. *Hyperostosis of the Extremities of the Right Tibia and Fibula, after Amputation of the Leg.*

Private William Nevelling, Co. A, 71st Penn. Vols., was wounded at White Oak Swamp, June 29th, 1862, by a conoidal musket ball, which shattered the right ankle-joint, and splintered the tibia longitudinally for several inches.

Amputation was performed, a few hours subsequently, at the middle of the leg. On July 1st, the patient was made a prisoner, and was conveyed to Richmond. He was released on July 25th, and was sent to Broad and Cherry Street Hospital, in Philadelphia. Here the stump was irritable and indisposed to heal: the tibia became necrosed, and a ring of bone was thrown off from its extremity. On June 10th, 1863, the patient was transferred to Satterlee General Hospital. The stump was still open, and the extremities of the tibia and fibula were greatly enlarged. Over the hyperostosis, the soft parts were continually ulcerating.

On August 27th, 1863, the disease of the bones had extended as high as the insertion of the ligamentum patellæ, and re-amputation was decided upon. The operation was performed at the knee-joint, by Acting Asst. Surgeon T. G. Morton, U. S. A. He made a long anterior flap, leaving the patella in position, and a short posterior flap. The patient promptly recovered with a firm, well rounded stump. A photograph of the stump accompanies the Specimen, which is numbered 2778 in the Museum Collection.

The extraordinary osseous formation at the divided extremities of the tibia and fibula is due to an exaggeration of the natural process by which the extremities of bones are rounded off, and presents the histological characters of ordinary callus.

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PHOTOGRAPHIC SERIES, No. 100. *Seven Heads of Humeri excised for Gunshot Injuries.*

Specimen 2944 shows a fracture of the surgical neck of the right humerus, in the case of Private J. L. Butler, Co. G, 45th Penn. Vols. He was wounded June 3d, 1864. Excision was performed June 11th. at Carver Hospital. The wound did well for several weeks, but the case terminated fatally August 16th, 1864, from chronic diarrhœa.

Specimen 2599 is from Private John Farrel, Co. C, 72d Penn. Vols. He was wounded at Gettysburg, July 3d, 1863. Excision was performed on July 22d, and death ensued on July 27th.

Specimen 1999. Corporal Raselas MacLane, Co. C, 1st U. S. Sharpshooters, had a conoidal musket ball lodged in the head of the right humerus, November 27th, 1863. Excision was practiced on December 20th, 1863, at Fairfax Seminary Hospital. No bad symptoms supervened, and the patient was discharged from service on February 22d, 1864.

Specimen 2363 was furnished by Private D. B. Wiggin, Co. F, 1st Maine Heavy Artillery, wounded at the battle of North Anna, May 19th, 1864. The operation was performed at Armory Square Hospital on May 23d, and the patient died on June 8th.

Specimen 2830 is from Private William Whitcomb, Co. B, 60th Ohio Volunteers.

1875 *Specimen* ~~2830~~ is a singular example of an excision of the upper extremity of a humerus, necrosed in consequence of a gunshot injury, the involucrum having previously been perforated by a trephine. Case of Private Theodore Peterson. Death, April 22d, 1863.

Specimen 2595 is the head of the left humerus of Private Charles Naylor, Co. I, 11th New York Vols., who was wounded May 3d, 1863. Excision performed August 16th, 1863, by Dr. J. H. McClellan. The result was very satisfactory and Naylor was transferred to the Veteran Reserve Corps, February 25th, 1864.

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